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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,524	11/14/2003	Andrey A. Demidov	NU-207WO-1	2224
38731	7590	11/16/2005	EXAMINER	
NUFERN				KIM, ELLEN E
7 AIRPORT PARK ROAD				PAPER NUMBER
EAST GRANBY, CT 06026				2874

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/714,524	DEMIDOV ET AL.
	Examiner Ellen Kim	Art Unit 2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-121 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-121 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____ .   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: ____ .                                   |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-6, 9, 13-18, 40-52, 75, 76, 80, 93-115, 119, 120, and 121 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pan et al [USPAT 6,018,534].**

Pan et al disclose a fiber Bragg grating DFB-DBR interactive laser comprising:

An optical fiber 15 [fig. 1] having a first section and a second section [splicing method, see column 4, lines 7-18];  
A first reflector 11; and  
A second reflector 12.

In re claims 2, 3, 49-50, 97, 98, 110, and 111, Pan et al clearly teach at column 4, lines 7-24 that the first active material can be the same as the second active material, or different than the second active material.

In re claims 13-17, and 40-42, Pan et al clearly show the third reflector 13

[long period grating] in fig. 1.

In re claim 96, Pan et al show all the claimed structural limitations, therefore, the claimed characteristics of the Raman Stokes shift and the power of the energy is inherently shown by Pan et al device.

**Claims 1, 2, 4-6, 9, 13-36, 40-49, 51-55, 61, 66-80, 82-97, and 99-105 are further rejected under 35 U.S.C. 102(b) as being clearly anticipated by Grubb et al [USPAT 6,181,465].**

Grubb et al disclose an optical fiber gain medium comprising 4 reflectors [fiber Bragg gratings] as shown in fig. 4.

In re claims 25, 31, 36, 66, and 102, Grubb et al do not show the splicing method.

The claimed method of forming the device, such as splicing method is not germane to the issue of patentability of the device itself. Therefore this limitation has not given any patentable weight.

In re claims 26-30, Grubb et al teach at column 6, lines 45-55 that several gratings can be employed.

In re claims 32-35, 41, 42 Grubb et al teach in abstract that the absorbing layer

or long period gratings can be utilized in the optical fiber.

In re claims 75-80, 93-95, 114-119, Examiner considers the "section" as a portion of an optical fiber having a grating for examination purpose. Note that Applicant fails to define the definition of the "section" in the claim, and the method of forming the device is not germane to the issue of patentability of the device itself.

In re claims 81 and 120, Examiner considers the "section" as a first portion of an optical fiber having a grating, and a second portion of the optical fiber without a grating for examination purpose. Note that Applicant fails to define the definition of the "section" in the claim, and the method of forming the device is not germane to the issue of patentability of the device itself.

In re claims 83-90, Grubb et al show all the claimed structural limitations, therefore, the claimed wavelength relationships are inherently shown by Grubb et al device.

In re claim 96, Grubb et al show all the claimed structural limitations, therefore, the claimed characteristics of the Raman Stokes shift and the power of the energy is inherently shown by Pan et al device.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 7, 8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al.**

In re claims 7, 8, and 10-12, Pan et al do not show the claimed material.

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify to include the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

**In re claims 7, 8, 10-12, 37-39, 56-60, and 62-65, Grubb et al do not show the claimed material.**

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify to include the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Conclusion***

In formation regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim  
Primary Examiner  
November 9, 2005/EK

A handwritten signature in black ink, appearing to read "Ellen E. Kim".